From Cows to Computers
Vet School Promotes Computer-Assisted Learning

by Catherine Curran, Information Technology Publications

Dr. George Cardinet's message to fellow veterinarians is simple — information technology is changing the way we teach and practice medicine.

At a joint session of the American Association of Veterinary Medical Colleges and the American Association of Veterinary Anesthetists at the American Veterinary Association's annual convention in Louisville, Cardinet showed his colleagues how computer networking promotes collaboration and shared resources.

"Each school is no longer a monopoly," Cardinet said. "Information technology makes it possible for us to share resources through a variety of mechanisms."

Cardinet illustrated his point with an online tour of the Veterinary Medicine Education Network (VETINET). He took his audience to a World Wide Web site at Oklahoma State University, where he checked out student teaching materials used by veterinarians at North Carolina State University, and opened a Canine Radiology program created by his colleagues at Davis, Dr. Janine B. Kasper.

As Associate Dean of Academic Programs, Cardinet is describing the development of a distributed computing environment at UCD's School of Veterinary Medicine. His vision calls for a fully networked environment with computers in the classrooms and a curriculum that promotes the use of online resources.

"Here is a look at the components of the vet school program."

• How-to Instruction: All first-year students have access to computers and software programs.

Listprocessor Goes to Work on Campus
From Law Librarians to Economists, E-mail Application Attracts Many

by Bonnie Johnston, Information Technology Publications

Need to know why it's traditional to dress boys in blue and girls in pink? The percentage of the Russian Federation's gross domestic product spent on defense this year? How to say "Happy Birthday" in Swahili? If you subscribe to STUMPLERS-L, a mailing list devoted to answering obscure and difficult-to-research questions, then you already know the answers to these questions.

STUMPLERS-L was established to help reference librarians and other researchers who frequently field questions with answers that are difficult to find using traditional search methods. This list demonstrates the greatest benefit of a mailing list: STUMPLERS-L allows members to easily and quickly draw on a large pool of expert knowledge and reference materials — in spite of the fact that participants are scattered throughout the world.

Of course, you may not want to go to the trouble of wading through the 15 to 50 postings generated by STUMPLERS-L just to find out which soccer player scored the most goals in a World Cup game. Does this mean lists like STUMPLERS-L are useless to you? Not at all — even though you are not subscribed to a list, you may still be able to take advantage of the wealth of information its members have generated in the past. Many mailing lists automatically archive past discussions, which you can search by sending e-mail to the server containing a search command and keywords (even if you are not a list member).

How do mailing lists get established? Many are started by one or two individuals who need information that is not readily available to them, and who see the potential resource created by quick and easy communication with a large number of people in the same position. UCD's law-lib list began this way: Al Lewis, now retired from UCD's law library, had been communicating with a few colleagues in San Francisco via e-mail, and convinced them to participate in an e-mail bulletin board which he set up with the help of Elizabeth St. George.

"Word spread, and pretty soon more and more law librarians heard about it and wanted to join," says Judy Janes, who now maintains the law-lib list. "I took over in 1992, and we've since moved on to listproc software — and are thinking about newsgroups."

Dave Zavatsky of Information Technology, UCD's Postmaster, helped Janes move the list over to Listprocessor in January of 1994. "It caused about because of the LAW-LIB list became such an enormous time commitment, adding and removing people from an alias file," explained Zavatsky. "We wanted the list to be archived, and for those archives to be retrievable in some automated fashion. And we wanted people to be able to add and remove themselves automatically. Listprocessor let us do all that — it worked so well that we moved all the aliases over to Listprocessor mailing lists. Since January we have over 250 lists."

What does it take to start your own list? "We have some general guidelines," says Zavatsky. "Essentially, it has to support some kind of university function, so it needs to be supporting staff, or a class, or some kind of research topic."

Zavatsky adds that these guidelines are flexible: "If your list is something that really doesn't support one particular department but it's beneficial to the whole university system, there's no problem with that. Sometimes people will have really good ideas that will serve the whole Internet community — like the "

I.T. Offices Relocate in Academic Surge

Several groups that mesh together to form the Division of Information Technology are converging in the new Academic Surge building. Associate Vice Chancellor for Information Technology Carole Barnes, Distributed Computing and Support (DCAS), Advanced Networked and Science Applications (ANSA), Information Technology Publications, and members of the Campus Access Point, and Instructional Services are now located in Academic Surge. Information Technology's Planning, Strategy and Administration soon will follow.

On the Inside

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Account Watch

The number of new computing accounts registered with I.T.'s new account facility this fall is up more than 40 percent over last year. Between Sept. 1st and Nov. 5th of this year, I.T. statistics show 4,215 new accounts registered. That compares with 4,409 new accounts registered for all of fall quarter last year.

Statistics from I.T.'s Distributed Computing Analysis and Support group show 29,818 I.T. computer accounts registered on campus.

"Quotables"

"And what about the stunning revolution in information technology? How can we use this dazzling capacity to best advantage in the education of our undergraduates? These new pathways to learning must never, will never, replace faculty. But they can make faculty more accessible to students. They do not necessarily narrow horizons to the video screen; in fact they can take the student through the screen, outside the classroom to the farthest corners of the geographical and intellectual map."

Chancellor Larry N. Vanderhoef
Inaugural Address
September 26, 1994
Would the Real Gopher Please Come Out?

Dear Editor:

Some time ago the I.T. Times carried an article on Gopher with an illustration of some kind of a rat (which I presumed was as much a Californian would know of rodents).

Needless to say, as a gopher graduate (alumnus of the University of Minnesota), I was dismayed!

The gopher of Minnesota fame is really a 13-striped ground squirrel. Today, thanks to the UM Alumni Association, I have an authentic, cartoonized, nearly real gopher.

Sincerely,
Bob Campbell
Professor Emeritus
Plant Pathology
rcampbell@u划定vis.edu

Letters are welcome. Please mail them to IT-Publications@PSA, or send e-mail to 1pubs@划定vis.edu. All letters are subject to editing.

Educate America Act Is on the Internet

The Educate America Act, signed into law by President Clinton, is available on the Internet in the U.S. Department of Education's online library. Along with research reports, fact sheets, education statistics, and references to other Internet resources, the library can be accessed by Gopher, pointing the client to gopher.ed.gov through World Wide Web (WWW), using the resource locator http://www.ed.gov, or by anonymous ftp at the address ftp.ed.gov. (from Educom review)

Courses Build Computing Skills

The Division of Information Technology in partnership with Staff Development offers a full range of electronic communication courses. The two- to three-hour workshops give hands-on practice, and by that you need to investigate the wealth of information accessible through the Internet. Courses cover many topics including the following: Electronic Communication for the Novice, Eudora, Internet Tools, Remote Access Tools, Laissez Administration, and World Wide Web Server Administration. For further information call 754-8091 or send e-mail to learn@u划定vis.edu.

Creative Communication Services offers the following: binding, copyright services, copy services, distance learning, design services, equipment loan, equipment repair, framing and matting, hypermedia applications, illustrations, instructional graphics, mail merging, microcomputing, media production, microfiche, printing, photography, playbook centers, poster services, publications, production, and video conferencing.

Richard S. Kaye
Director, Communications Resources

Don't let the old red telephone booth fool you. Plenty of high-tech changes are happening inside the Telecom Building. And Dick Kaye is right in the middle of them. Before the establishment of Information Technology in October 1992, Communications Resources (formerly Telecom) provided services for computing in a campuswide telephone and telecommunications services.

Besides keeping the administrative wheels of the organization turning, I Hartrine serves as the Project Director for the Network 21 project, overseeing nine teams of talented staff that will be responsible for its implementation. Hartrine has also spent the last year chairing an Information Technology Outreach Program Task Force that is responsible for defining a multi-level, multi-located blueprint for campuswide information technology education and technology support. Once implemented it is envisioned that this program will greatly enhance the campus' effectiveness in the use of information technology. In effect, Hartrine says, "the program will provide the coordination and economies of scale of a centrally supported support structure, but the flexibility and responsiveness of a decentralized support team." Hartrine also is a member of the systemwide Technical Acquisition Support Advisory Committee, which works to ensure the procurement of cost-effective software and hardware agreements for the University.

Les Unger
Director, Center for Creative Communication Services

What do printed documents, educational videos and multimedia computer-based learning programs have in common? The Center for Creative Communication Services and its director, Les J. Unger.

Before advancing in digital technology led to integration of graphics, text, and video, campus customers went through three separate departments for these very diverse products or services. Now Illustration Services, Instructional Media and Repro Graphics are all one team. The newly formed Creative Communication Services runs a high-tech, services-oriented shop.

"To meet our customers' expectations, we are constantly channeling our energies toward extensive and in-depth technical training and service," says Unger, who directed Repro Graphics from its beginning as a fully computerized operation.

Digital files can be imported via the campus network to a variety of publishing systems. Currently, The Center for..."
Digital Camera

Is on View

CAIT's Corner

This year's UCACS Conference

Chieflyn Lynch noted the growing dilemma of a computer-accessible library that differentially provides online access to journal articles. Articles that can be accessed directly online represent a small and selective set of the scholarly works available; Lynch said. He noted that adding full text to journal databases introduces bias in citation because the full text articles are cited more frequently. Journals published in the popular media are more likely to be cited in scholarly articles.

- An active group organized by the Office of the President is responsible for organizing and financing relevant software. Jim Dolanov announced that Apple, PIP (Inc.), DEC, SAS, Sybase, SUN, Microsoft, and Maple are part of the UCOP's site-licensing agreement. While conference participants all expressed the need for financial benefits of site-licensed software, epiphanies varied in discussion regarding the best way to distribute current and future site-licensing agreements.

- John Cope, a principal at SUNY system's and a former creator at CT/C, pointed out that the importance of the mouse and desktop concepts familiar to those generally overlooked when presented in the 1960s over 25 years ago. It is likely, he claims, and I agree, that the really lasting technology of today is being equally overlooked yet could be right under our noses.

For instance, he pointed to the variety of worlds one can enter through the World Wide Web. In today's computer world, the opportunities made possible by the World Wide Web are attracting a diverse group of computing public that is willing to spend the time creating even newer virtual worlds.

Although this can seem to be an act of creating virtual "content," it may prove to be a driving force in the development of future network applications. Even though the online information being accessed today may not paint a complete picture, the thirst for that information is insatiable and our image of what is real changes daily.

When we began these conferences 12 years ago our big question was, "How do we get people at the university to appreciate the need for computing?"

Now the question is, "How do we satisfy a seemingly insatiable need?"
The M-Bone's Connected to...

Program Puts Multimedia, Network Conferencing Tools at Your Fingertips

by Catherine Curran, Information Technology Publications

When Russ Hobby logs on to his computer, he is never sure whom he will meet. Take time a group of Australian scientists sang "happy birthday" to his one-year-old daugh-

ter, Lystra.

"I went into the directory to see what conferences were listed and ended up video conferencing with a group at the University of Queensland in Australia," said Hobby, director of Information Technology's Advanced Networked and Scientific Applications.

"It was shortly after five-thirty on a Thursday evening, but it was already Friday morning in Australia," Hobby said. "My daughter, who was turning one on Friday, came to my office dur-

ing the conference. When they returned it was her birthday in Australia,
time, they sang." The chain of events was inspired by the Multicast Backbone - M-Bone for short. M-Bone is a multimedia net-

working program I hobby helped de-

velop through his work with the Internet Engineering Task Force. One of the goals of the task force is to de-

velop Internet application standards. Work on the standards identified the need to do conferencing on the

Online Information Guides Network Users to Available Services

Answers to questions about computer networking are now available online through the Network Administra-

ator Resources program (NAR).

The NAR service offers information on the following:

• Answers to frequently asked technical questions;
• Descriptions of services provided by Information Technology;
• Announcements of classes and computing demonstrations;
• Mailing lists;
• Information about how to obtain networking software;
• Instructional opportunities;
• Computing presentations.

Answers to frequently asked techni-

cal questions are posted on the Campuswide Information System (CWS). Using gopher follow these paths:

The Campus/Using Computers on Campus/Information Technology/Frequently Asked Computing Questions/UCD Net/NAR Resources & Information/Descriptions of services provided by the Division of Information Technology, including names of those who can assist for further information, costs, and cross-references to related services - are indexed by keyword and posted on both the CWS and the World Wide Web (WWW).

To access on the CWS, using gopher follow these paths:

Have you ever wondered why there is so much oil in Texas, but not in Wisconsin? What are the deepest estuaries in the United States? The answer might surprise you! While the answers to many of these questions might be as close as an encyclo-

dedia, some questions are difficult to answer without checking many sources.

The U.S. Geological Survey now of-

fers a new, experimental Internet ser-

vice - Ask-A-Geologist. All electronic mail to Ask-A-Geologist will be routed to the geologist of the day. The geologist will reply to your questions within a day or two, or pro-

vide referrals to better sources of in-
formation. All questions and answers will be part of the public record.

Send e-mail to ask-a-geologist@octopus.usgs.gov.

If you have any questions about this service, but not about geology, please contact the system administra-

tors - Roy Sanders at octopus@octopus.wr.usgs.gov.

Information in this article is based on work by the Info Scout, Susan Calcatari, and supported by the National Science Foundation.
A Community Partnership
Networking, Distance Learning, and Telecommuting All in One Package

by Vicki Suier, Distributed Computing Analysis and Support

In these budget-tight times, how can UC Davis fulfill its diverse missions of teaching, research, and public service while keeping on top of the dizzying developments in information network technology? By finding new ways to provide distance education, and promoting collaboration between the university, community colleges, and K-12 education? Now imagine there was a way to accomplish all that while also fighting air pollution. That seemingly improbable collection of goals is precisely what the innovative research contract between the Division of Information Technology and the California Department of Transportation (CALTRANS) is designed to accomplish.

The UCD-CALTRANS Davis Community Network, Telecommuting and Distance Education Project benefits everyone involved. With the formation of the Davis Community Network (DCN), Davis residents are gaining access to a wide range of online services—e-mail, conferencing, public forums, local community bulletin boards, and global information networks, along with the training necessary to become well-versed in information technology. The goals of the Department of Transportation—a well-being of the public as large as the well-being of the community—is to serve the telecommuting component of the plan, with its potential for cutting down traffic congestion and improving air quality.

The university benefits from the chance to have a joint group of UC personnel, including the DCT-CALTRANS project team and staffers from the Information Technology Campus Access Point (IT-CAP) and the Center for Advanced Information Technology (CAIT), test a wide range of new electronic communication and internet tools. With the help of community volunteers, these groups pass along the benefits of their experience to faculty, staff and students.

All at the same time, the contract sets up research agreements between the Division of Information Technology and a number of private vendors that allows UC to test new SDN and wireless connectivity without making risky capital investments in potentially unstable new technologies. The agreements formalize and extend UC’s informal practice of using loaner equipment for testing and evaluation, using the new agreements as a two-year term and provide the opportunity to test in a real-world context rather than in an evaluation lab. The results of these pilot tests will help UC extend the high-speed connectivity of CAIT’s Network 21 off-campus and facilitate access to higher-end technologies.

In addition, the contract has helped forge new collaborative links between the university, the California Community Colleges Chancellor’s Office, and the K-12 education sector that will not only help coordinate network access and training with K-12, but in particular will help foster new approaches to providing distance education. This year the DCN-CALTRANS project team will work with technical and educational staff from the contract partners to test desktop video conferencing equipment and software in a pilot teaching project. The project plan is to develop a full “curricular toolkit” of electronic communication tools and to rigorously evaluate how these tools might affect curriculum development and learning.

All of which demonstrates a point—that the university’s research, teaching, and public service goals are not mutually exclusive and need not necessarily be problem-solving and problem-solving for the same reasons. Creative solutions like the UCD-CALTRANS research project can serve the public and community service mission of the university while reaping significant benefits for the campus and, in this case, allowing the university to fully participate in the fast-moving world of electronic communications technology.

Presentations Focus on Network Applications

Networking was a popular topic at Computer Fest ’94. “Information Highwaymen” Ken Weiss and Steve Faith took part on a brownbag journey of the World Wide Web. As programmer/analyst for IT’s Distributed Computing Analysis and Support group, Weiss and Faith assembled a compendium of internet and networked applications. Weiss Harrington, pictured with a piece of broadband cable, prepared his audience on how to plan for a network that will serve current and future needs. Through his work with IT’s Communications Resources, Harrington helps departmental plans and install Local Area Networks.

Others from Information Technology presented seminars as well. Katie Stevens of the I.T.-Campus Access Point demonstrated the Eudora e-mail program. Russ Hobby, director of Advanced Networked and Scientific Applications, introduced his audience to the Multicast Backbone—a multimedia network conferencing tool.

Sponsored by the Division of Information Technology and the UCD Bookstore, Computer Fest ’94 took place in October.

Network Difficulties! Call the NOC

Those experiencing network difficulties are encouraged to contact the Network Operations Center (NOC). Located in I.T.’s Communications Resources building, the NOC provides extended customer support in the evenings and early morning. The center accepts trouble reports during the following days and hours:

**Monday** 3 p.m. to midnight
**Tuesday** 7 a.m. to midnight
**Wednesday** 7 a.m. to midnight
**Thursday** 7 a.m. to 4 p.m.
**Friday** 7 a.m. to 4 p.m.

To report a network difficulty call 752-7656. When placing a trouble call, please include the following information:

- **Your name**
- **Return phone number**
- **Where you are located (i.e., building & room number)**
- **The nature of your problem**

**Note:** The NOC will also contact the Network Operations Center via e-mail. Send e-mail to itnet@ucdavis.edu.

Network News

Continued from Page 4

Internet Yellow Pages, by Harley Hahn and Rick Stout. The book provides users with reference information useful when searching the Internet. It contains more than 2,400 free Internet resources, an annotated list of Usenet news groups, and definitions and hints about posted information. Price: $27.95 + $5.00 shipping. Contact: Osborne McGraw-Hill at 800-227-0900. (From Edacom Reviews)

Happy Birthday to the Internet: Twenty-five years ago the Internet began with the creation of ARPANET, funded by the Department of Defense’s Advanced Research Project Agency. Vint Cerf, president of the Internet Society and one of the people who participated in that ARPANET project, says: “You don’t know how far you’ve come until you stop and look back.” (Networking 7/9/94 p.56)

WWW Over E-mail: CERN, the European research group that developed the World-Wide Web, now makes it possible for people to get Web pages via e-mail. Send a message to ftpnews@wanex.com.cn and in the body of the message type the Universal Resource Locator for the Web page you want. (Chronicle of Higher Education 9/21/94 A25)

Client-Server for Less: A survey of 305 information systems managers by Business Research Group shows client-server systems costing an average of 8% less than original mainframe systems. More than half of the respondents say they’re saving an average of 29% on client-server systems, while 19% say costs have increased. (Information Week 9/19/94 p.22)

A Virtual Library of Congress: The Library of Congress is planning to create a virtual library of digitized images of its collections of books, manuscripts, photos, etc., for transmission over computer networks. A Digital Library Advisory Committee will seek private and industry donations in addition to appropriations from Congress. The goal will be to convert the “most important” materials by the year 2000. (New York Times 9/12/94 B1)

E-Forms of Your Finger tips: Companies with more than 500 employees typically spend between $94 billion and $120 billion per year on some 1,210 different paper forms. Fortunately, electronic forms—accessed, filled out, and filed online—are making a dent in the paper chase. BIS Strategics President predicts a 118% increase in the average number of e-forms processed each month between 1995 and 1996 (compared with 4% for paper). (Information Week 8/19/94 p.42)
Choosing a List That's Right for You

Here are the top three reasons people give for not using a listprocesser:
1. I don't know how.
2. I don't have time.
3. What's a listprocesser?

If you know how to read and answer e-mail, then you already have the basic skills you need to take advantage of UCDC's listprocesser. Listprocesser distributes all messages via e-mail, and all listprocessor commands can be issued by sending an e-mail message to listprocess@ucdavis.edu with a blank subject line and the command in the body of the e-mail.

Setting up a List

The initial setup for a list involves nothing more than a phone call to UCDC Postmaster Dave Zavatoni, and a few minutes to e-mail your list of subscribers to listprocesser. Once your list has been created, the amount of time you spend maintaining it can vary widely, depending on the kind of list you want to establish. You can control your time investment in the list with the options that you choose during the initial setup.

Choosing the Right List for You

A listprocesser is a program that automatically distributes the mailing list by e-mail. You will receive no hard copies. If this works well, it is possible that all campus directories will be distributed exclusively through e-mail at some point in the future.

Agricultural Economics

I'll never teach a class without e-mail again, so long as it's universally available to the students," states Lawrence Shepard, Agricultural Economics. Shepard, who teaches classes in personal finance and investment, incorporated e-mail into his AGEC 143 class last fall. "I have become an enthusiastic proponent of e-mail in the classroom." He lamented his initial frustration at having to distribute homework assignments and other materials to the students. "I have been more patient with fewer resources," he says.

About three weeks before the end of the Winter quarter, Shepard used the preliminary roster for AGEC 143 to write a short note to his students, letting them know what they might expect from the class. Shepard felt this initial contact allowed him to establish a rapport with class members. "When you teach to 300 students, you're scrounging your head for ways to make it a personal experience," says Shepard. "On the first day of class, I'd already contacted about two-thirds of my students -- they knew I was excited about the course."

Shepard required his students to sign in at the start meeting within the first two weeks of the class, and he made learning to read and send e-mail a priority. A handout on using a listprocesser was also available in his course syllabus. He was then able to distribute class assignments, homework assignments, answers to problem sets, optional readings, and information about class projects via the class mailing list.

The students talked to each other as well as to me. For example, if you were a student who was going to tour a certain stock on our stock market game, then you could send it to the whole class, and everyone saw the same piece of mail," Shepard says. Rumors swept through the simulated stock market daily, adding realism and insight into how real financial markets work, and how they fail.

While Shepard agrees that the savings in class materials (handouts, homework corrections, etc.) was significant, he feels that the most important thing that e-mail saved him was more efficient instructor and a more efficient faculty member in a time when we are all forced to do more with fewer resources," he says.

ning a list that's right for you is not a one-time decision. The key is to have a system that works for you and the people you are sharing the list with. The listprocesser makes it easy to do.

Office of Administration

James Hamilton, in the Office of Administration, relies on her own list to communicate with sixty-plus departmental supervisors, management team, program directors, and staff members.

"I believe that e-mail is a very important tool for communication. It is a very efficient way to get out information," Hamilton says. "I have more confidence in what I send by e-mail than I do when I put it in a letter." Hamilton's list includes everyone in the Office of Administration, from the dean to the receptionists. The list allows Hamilton to send out information simultaneously to everyone in her office.

Hamilton's list has found e-mail to be a big time-saver. During the last two years, the Office of Administration has used the list to save time by sending out materials to the entire office simultaneously.

Hamilton's list includes everyone in the Office of Administration, from the dean to the receptionists. The list allows Hamilton to send out information simultaneously to everyone in her office.

Shepard had no experience with a mailing list before joining the University. "I don't know how to have experience," he says. "I just communicated with Dave Zavatoni, and he told me how to do it. That's the best way to have an expert." Shepard also took advantage of the computer expertise his students already possessed -- he asked for a volunteer to serve as class postmaster -- a student who was already familiar with e-mail and could also help others who had problems. "Students often come to you when they are nervous about using e-mail."
The Insider
Continued from Page 2
be used — the expanded access to information and types of tools that are available, for instance — we think our work is well worth the effort.”
DCAS is always interested in hearing from the campus about new client/server applications under development and the types of services that are needed. Send e-mail to dcas@ucdavis.edu. DCAS provides descriptions of its current work through the World Wide Web.

Lana Moffitt
Director, Information Resources
Perhaps Lana Moffitt sums up the feelings of many who deal with change when she says, “you can never do as much as you want to do, as well as you want to do it.”
As director of Information Resources, Moffitt oversees a diverse repository of campus computing resources, ranging from UCD’s central computing systems to the Center for Advanced Information Technology (CAIT). The campus computing labs, the Campus Access Point (TCP-CAP), instruction and applications development also fall under the Information Resources umbrella.

Computing and networking capabilities are placing an increased demand on all IT services,” says Moffitt, “and our goal is to give the campus the methods it needs to access computing resources in the easiest way possible.” To fulfill that goal, Information Resources seeks to develop applications that present information in ways that are most useful for the users of those systems. The emphasis is on the information, rather than the technology. An example of this is the simplified version of the Student Information System database, which is available for query purposes. Campus departmental staff use desktop software to extract and format data. Although the process to create this ability required sophisticated technical skills, it can be used effectively after only a brief training period.

Information Resources also constantly looks for ways to improve service delivery. This quarter the central computing systems were improved to add the addition of new hardware and upgrades of the operating systems. “This effort resulted in the ability to handle a 100% increase in the number of simultaneous users,” says Moffitt.

“The growth in the need for computing services can only be called explosive. That growth was matched by the capacity of the systems supplied by the staff involved in the upgrades,” she says, and reflectively adds, “we accept change as a constant in our world. Perhaps, it is the change that we actually enjoy the opportunities it provides.”

Vet School Promotes Computer-Assisted Learning
Continued from Page 1
vet med students are required to take an “informatics” course that teaches them how to do “modular searches, go online into the Health Sciences Library and use e-mail. For one class assignment, students must use on-line resources to produce a bibliographic on topic.

* World Wide Web The School of Veterinary Medicine has a home page on the World Wide Web (http://vgrgopher.ucdavis.edu). Developed by

Randi Parchner, contents include the following: faculty biographies, course descriptions and samples of educational software produced by vet med faculty. * Educational Software Faculty are actively involved in developing educational software. Often called courseware, these programs provide learning opportunities and found in textbooks — or under the microscope. Dr. Kasper, who participates in the development of many programs, says the vet school has an agreement allowing students to obtain software developed by the school for personal use. The school also is obtaining copyright to its programs. (See Interactive Software article that appears below)

* CALF: This is the acronym for the Computer-Assisted Learning Facility. Located in Jarring Hall, the CALF facilitates the use and development of educational software. It serves as both a teaching and research lab. Dr. Kasper is the Program Director of the CALF, and the School of Veterinary Medicine also employs a multimedia computer programmer, Rick Iato, who participates in the development of new programs for Macintosh platforms. CALF personnel distribute the programs to classes.

Dr. Janine B. Kasper demonstrates an educational software program developed by the School of Veterinary Medicine.

**Interactive Software Entices Students**
Editor’s Note: Many departments are using educational software to supplement classroom teaching. The Division of Information Technology provides consultation on the development of interactive software programs. Call 752-2018.

Faculty at the School of Veterinary Medicine have developed educational software programs on a variety of subjects. The programs support classroom teaching and research. Faculty who incorporate the computer programs into their curriculum cite many benefits, including the following:

* The programs are interactive. Unlike textbooks that display only linear drawings, computer graphics create a three-dimensional effect. Many programs have built-in quizzes, allowing students to test their knowledge. A beep sounds when an incorrect answer is given, alerting the student to go back and review the material.
* The programs preserve images, so students can review material more than once. For example, a program used to teach hematology displays images of different cell types that students can call up on the screen to study. In some instances, students are able to view on computer an unusual situation they might not have an opportunity to see under the microscope.
* The programs encourage collaboration. It is unusual to see a group of students huddled around a computer screen discussing a problem posed in a program.

Here is a brief look at just a few of the educational software programs developed by the School of Veterinary Medicine:

**Canine Osteology** Developed by Dr. Janine B. Kasper, Dr. George Lendrum, and David Magliao, this program contains text and graphics. It is used to teach osteology to first-year students. Canine Osteology was the first educational software program marketed by the School of Veterinary Medicine. The School has a demonstration disk it sends out for review.

**Spud** Developed by Dr. Dwight C. Birds, a veterinarian, this is one novel use of the “open book” midterm examination for second-year veterinary students in microbiology.

**Canine Radiographic Anatomy** Dr. William J. Hornsby and John Douval are developing a series of programs using computer graphics to teach veterinary science. One program in the series simulates x-rays seen on film to demonstrate how to get the exposures needed to make a diagnosis.

**Interactive Laboratory Instruction in Veterinary Hematology** Dr. Nelam C. Jaim uses this program to teach the same subject. Students view images of abnormalities in leukocytes and bone marrow. A “control screen” displays images of normal data, giving students a point of comparison.

**Computer Assisted Case Management and Decision Making** Dr. Gerald V. Ling, associate director of the Small Animal Clinic, incorporated 20 cases in various stages of completion into this program. The program gives students an opportunity to start clinical cases before their fourth year. The case management program provides practice in using VMTH forms and practice in problem solving.

**Use of Digital Images in General Pathology** Dr. Dennis Wilson says this program is a very useful laboratory teaching aid. Because students like to study clinical cases, Wilson incorporates the images into a case-based format.

**Clinical Simulations** This program is designed to teach students the problem-solving skills needed to practice veterinary medicine. While Dr. Donald Strombeck developed this test-based program, students say it is well suited for use by private practitioners. Students make decisions based on the patient profiles presented on computer.

**Vet Lab** Sisters B. Sallam and N. Thomas, parasitologist. Grain Parasitology was developed by Robin Houston in collaboration with Drs. Walter Boyes and Patricia Conard to support classroom instruction in parasitology. The program was initially conceived by George McKay, a veterinary student at UCSD, to facilitate his studies of parasitology.

For further information on these and other educational software programs developed by the School of Veterinary Medicine, contact the Computer Assisted Learning Facility (CAI.F) at 752-2477.

Program Provides Discounts on Microsoft Products
Information Technology is pleased to announce the University of California, Davis is participating in the Microsoft Select Volume Purchase Program. The University of California Office of the President (UCOP) awarded Warframe the contract. As a result of the agreement, Warframe will be acting as the distributor for Microsoft products.

The Select Volume Purchase Program enables campus faculty and staff to purchase Microsoft products for University use at a discount. For further information, contact the Information Technology Services Office at 752-2484 or send e-mail to ithelp@ucdavis.edu.
Creating a New Information World

by Karen M. Munro, Information Resources

Computer Chat answers some of the most frequently asked computing questions. Any question you would like to have addressed in this column can be directed to 754-8500 or sent by e-mail to tpt@ucsd.edu.

Those of you who walked through Shields Library at the beginning of Fall Quarter and saw the line at the I.T.-Campus Access Point (I.T.-CAP) Walk-in Facility, won't be surprised when I tell you this has been the busiest Fall Quarter on record for those of us in Information Technology. Between Sept. 26 and Nov. 11, I.T.-CAP walk-in Facility helped more than 8,670 people.

Half of the traffic resulted from password-related issues such as password expiration and clients forgetting either their passwords or computer account names. Hopefully, the new password checking program, which does not require clients to change their passwords as frequently, will decrease the percentage of password expiration problems.

If you have ever had a campus computer account, I.T.-CAP can look up your account and let you know how many times your password has been used. The password will be activated the following day. Your old password cannot be recovered. As a security measure, because the information is electronically encrypted, I.T.-CAP hours are Monday - Thursday 8 a.m. - 7 p.m. and Friday 8 a.m. - 6 p.m. The library is open to the public before 10 a.m. or between 5 and 7 p.m.

Today's question looks at another password issue.

If I have a campus computer account, do I need a separate password to use MELVYL?

We turned to Beverly French of the General Library for an answer. For the most part, no. The purpose behind MELVYL is to allow students access to the wide selection of information that are on the MELVYL databases is reserved for the exclusive use of UC students, faculty, and staff for university instruction, research, and student record. (List of the MELVYL catalog, on the other hand, is available to any member of the public and never requires you to come to the CAP. Since your campus computer account certifies you as an authorized university affiliate, you do not need a separate password to use the MELVYL databases. If you use a campus computer lab, for example, where you have entered your EZ, SZ, or EZ account and password, you can access all of the MELVYL databases without a separate password, but you will need a MELVYL password if you want to use the UPDATE command to repeat a search and have the results sent to you. If you are working from your home or office or a lab and you use your campus computer account to log on to MELVYL through one of the campus SUN servers (e.g., Rocky, Bullwinkle, Chip and Dale), or VMS machines (by typing telnet melsys.ucsd.edu at the prompt), you will need a MELVYL password to get into the MELVYL database. You can also use the UPDATE command to repeat a search, and you will need a password. You will need a MELVYL password, however, if you want to connect directly to MELVYL from your home or office without logging in through one of the SUN servers or VMS machines. You can obtain a MELVYL password from any library or Information Resources. I.T.-CAP student registration card or faculty/staff identification. Passwords are good for one year.

BANNER Upgrades Will Increase System Security

by Libby Bullock, Information Resources

Two new features are on the horizon for campus BANNER software, on the installation of an upgrade of the BANNER system software, and the implementation of a new password security system. The new version of the BANNER system software is expected to be in place in late November or early December, as soon as all testing is completed. The changes you experience in using BANNER will depend on how you access the program. Query-screen users will notice a few differences in the appearance of the screens. Other users will experience changes in two or three function keys. To some users the changes will be transparent.

The new password security system, Enigma Logic SafeWelder® is being installed to improve BANNER's password security. This additional security is necessary to ensure that the student data in BANNER is protected from unauthorized access. Users will login to Banner using an Enigma Logic token that generates a unique password for each login. For further information contact Libby Bullock at 752-5634 or send e-mail to libbul@ucsd.edu.

Eudora E-mail Program Available Free of Charge

Due to a university site-license agreement, copy protection, and the version of the Eudora e-mail program are now free to all faculty staff and students.

Eudora runs on both Macintosh and PC/Windows platforms, and it is fully compatible with the campus e-mail system. One of the noted benefits of the program is its document transfer feature. Eudora also allows you to store e-mail messages on your computer's hard disk.

1994-95 Campus Directory Is Coming Soon

by Zack Donnell, Communications Resources

Communications Resources is making the final preparations for the publishing of the 1994-95 Campus Directory. As we did last year with the opening of the Neurosciences facility in Research Park, this year we pushed back the update process to give campus departments affected by the opening of the Social Sciences & Humanities faculty more time to determine new locations for their staff and faculty.

New Telephones Placed on Campus

You may have noticed a new kind of single line telephone on the desks of fellow employees. Due to serious technical and problems, and the inability of the manufacturer to meet supply demands, I.T.'s Communications Resources has moved to a new single line telephone instrument manufacturer. The new STAR!® USIS telephones come in both a standard and speakerphone model.

Copies of the Eudora software program are available at all of the campus Access Point (I.T.-CAP). You may obtain a copy by bringing one high-density disk to the CAP's Walk-in Facility (located at the service desk closest to your college). You can also download the software from the World Wide Web site at http:// eudora.ucsd.edu.

For information call the I.T.-CAP at 752-2548 or send e-mail to hire@ucsd.edu.

Publications Are Available Online

Information Technology is posting back issues of the I.T. Times, Network 23 Planning Tips, and other publications on the World Wide Web. To access I.T. publications on the Web, follow these steps:

1. Click on Mosaic icon and pull down File menu.
2. Select Open URL.
4. Click on the publication you wish to view.

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